# Facts

## About Rescue 21

Rescue 21 is an advanced search and rescue (SAR) communications system that helps the Coast Guard more effectively locate and assist boaters in distress. The new system — fully operational by September 2006 — replaces the Coast Guard's current communications system, the National Distress Response System (NDRS), built in the 1970s. Among other capabilities, Rescue 21 enhances line-of-site coverage, increases position localization on a VHF-FM transmission, increases the number of voice and data channels available to the Coast Guard from one to six, and improves communications and information sharing between Coast Guard units and their federal, state, and local partners. Rescue 21 will save lives in the 21st century.

## Rescue 21 Installation

- A $611 million program, Rescue 21 plans call for the first systems to be in place by Sept. 30, 2003, in Atlantic City, N.J. and Chincoteague, Va. Plans call for system installation to be completed in all 46 Coast Guard regions by Sept. 30, 2006.

- Rescue 21 communications hardware and software will replace the current National Distress and Response System (NDRS), which has been in operation since the 1970.

- Rescue 21 entails the replacement of 3,000 Coast Guard portable VHF-FM radios; also, replacement will include:

    - Equipment at all remote VHF-FM transceiver sites and supplementing the network that interconnects the remote sites to the Coast Guard facilities;

    - Communications consoles at 270 Coast Guard facilities; and

    - Communications equipment on 657 Coast Guard vessels.

## Rescue 21 Timelines

- Rescue 21 implementation plans call for the first systems to be in place by September 30, 2003 in Atlantic City, N.J. and Chincoteague, Virginia.

- Thirty-five percent of the sites, or 16 out of 46 regions, are to be completed by September 2004. Deployment plans call for system installation in all 46 Coast Guard regions coast-to-coast by September 30, 2006.

- The Coast Guard's search and rescue (SAR) mission is likely to become even more challenging in the years ahead. Current and future trends indicate:

    - Increased maritime trade, resulting in unparalleled growth in the size and numbers of ships using inland, coastal, and international waterways;

    - Fishing vessels and offshore petroleum platforms venturing farther offshore; and

- Dramatically increasing numbers of personal watercraft and recreational boats, fueling greater congestion in the nation's waterways.

**Rescue 21 Features and Benefits**

- Rescue 21 ensures continuous, enhanced radio coverage out to 20 nautical miles from shore. Rescue 21 is powerful enough to hear the low-powered (1-watt) marine radios transmitting from 20 nautical miles offshore. Higher-powered radios may be heard even farther offshore.

- Rescue 21 supports a modern distress call feature known as Digital Selective Calling. The DSC signal received by Rescue 21 transmits vital vessel information, position, and nature of distress (if entered) at the push of a button that can be relayed through other nearby vessels to shore-side rescue authorities. The DSC radio can continuously transmit a MAYDAY automatically when the vessel operator may be prevented from doing so. To make this technology work, however, the boater **must** properly register the radio for an MMSI number and ensure it is connected to a Global Positioning System (GPS) navigation system.

- Rescue 21 increases channel capacity and allows for simultaneous communications on six channels, from commonly used Channel 16 to the new Channel 70 for digital selective calling (DSC). This enables Coast Guard watch standers to conduct multiple operations.

- Rescue 21's position location or direction finding capability allows Coast Guard personnel to pinpoint distressed vessels with either an actual position or along a bearing with 2 degrees accuracy.

- Rescue 21 offers protected communications for sensitive (unclassified) information, boat tracking for response coordination and digital voice recording with immediate playback for analyzing weak distress calls.

- Rescue 21 reduces system downtime by maintaining a 99.5% operational availability rate.

**Rescue 21 and the Environment**

- Whenever possible, the Coast Guard will co-locate system hardware or use/modify existing structures.

- Should new towers need to be built, the Coast Guard will attempt to erect new towers on existing Coast Guard property and work hand-in-hand with officials from the U.S. Fish & Wildlife Service so as to minimize the impact on the environment. Only when absolutely necessary will the Coast Guard erect new towers elsewhere.

- The most likely Rescue 21 environmental impacts will occur in deployment sites on or near migratory bird flyways. Towers with guywires especially pose a collision hazard to migrating flocks of birds, and are only being constructed if no other options exist.

- The Coast Guard is also committed to minimizing the impact of new tower construction on environmentally fragile wetland areas and historically significant sites.

**Rescue 21's Interoperability**

- Rescue 21 improves communications and information sharing between Coast Guard units and their federal, state, and local partners. This is vital to assure the well being of both recreational boaters and commercial mariners in regions requiring joint federal, state, and local response.

- By replacing outdated technology with a fully integrated communications system that bridges interoperability gaps, the Coast Guard's ability to protect mariners and our coasts — especially in this time of heightened homeland security — will become increasingly more effective.

**Project Details**

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